

WHAT IS CLAIMED IS:

1. A liquid crystal display device, comprising:

a liquid crystal cell, the liquid crystal cell including
a pair of substrates and a liquid crystal layer provided between
5 the pair of substrates;

a pair of polarizers provided so as to oppose each other
via the liquid crystal cell therebetween;

a phase compensation element provided between the liquid
crystal cell and at least one of the pair of polarizers; and

10 an antiglare layer provided on a viewer side of one of
the pair of polarizers which is provided closer to a viewer,

wherein the antiglare layer is designed so that a specular
reflection characteristic thereof for light incident thereupon
from the viewer side and a specular transmission characteristic
thereof for light transmitted therethrough from the liquid crystal
15 layer to the viewer side satisfy a predetermined relationship,
thereby suppressing a reduction in color reproducibility as viewed
from a direction inclined from a normal to a display plane.

2. The liquid crystal display device of claim 1, wherein
20 the phase compensation element has an index ellipsoid which has
three principal axes, a-axis, b-axis and c-axis, which are
orthogonal to one another and three principal refractive indices,
na, nb and nc, and wherein $n_a = n_c > n_b$, a-axis is substantially
parallel to a layer plane of the liquid crystal layer, and b-axis
25 is inclined with respect to a layer normal of the liquid crystal
layer.

3. The liquid crystal display device of claim 1, wherein the antiglare layer has an internal scattering layer and a scattering surface.

4. The liquid crystal display device of claim 3, wherein the internal scattering layer includes a polymer matrix and particles dispersed in the polymer matrix, the particles have a scattering center, and a refractive index of the particles and a refractive index of the polymer matrix are different from each other.

5. The liquid crystal display device of claim 1, wherein a haze value of the antiglare layer is equal to or greater than 15.

6. The liquid crystal display device of claim 1, wherein a haze value of the antiglare layer is equal to or greater than 40.

7. The liquid crystal display device of claim 1, wherein the antiglare layer is such that a value of transmitted image clarity is equal to or greater than 10 as measured with an image clarity meter in which a width of an optical comb is 0.5 mm.

8. The liquid crystal display device of claim 1, wherein a refractive index anisotropy $\Delta n(550)$ of a liquid crystal material of the liquid crystal layer for light having a wavelength of 550 nm is in a range of $0.060 < \Delta n(550) < 0.120$.

9. The liquid crystal display device of claim 1, wherein the phase compensation element is arranged so that b-axis forms an angle in a range of 15° to 75° with respect to a layer normal

of the liquid crystal layer.

10. The liquid crystal display device of claim 1, wherein $(n_a - n_b) \times d$ is in a range of 80 nm to 250 nm, where d denotes a thickness of the phase compensation element in a layer normal
5 direction of the liquid crystal layer.

11. A liquid crystal display device, comprising:

a liquid crystal cell, the liquid crystal cell including a pair of substrates and a liquid crystal layer provided between the pair of substrates;

10 a pair of polarizers provided so as to oppose each other via the liquid crystal cell therebetween;

a phase compensation element provided between the liquid crystal cell and at least one of the pair of polarizers; and

15 an antiglare layer provided on a viewer side of one of the pair of polarizers which is provided closer to a viewer, wherein:

the antiglare layer is designed so that a specular reflection characteristic thereof for light incident thereupon from the viewer side and a specular transmission characteristic thereof for light transmitted therethrough from the liquid crystal
20 layer to the viewer side satisfy a predetermined relationship, thereby suppressing a reduction in color reproducibility as viewed from a direction inclined from a normal to a display plane; and

the antiglare layer has an internal scattering layer and a scattering surface.

25 12. The liquid crystal display device of claim 11, wherein the phase compensation element has an index ellipsoid which has

three principal axes, a-axis, b-axis and c-axis, which are orthogonal to one another and three principal refractive indices, n_a , n_b and n_c , and wherein $n_a = n_c > n_b$, a-axis is substantially parallel to a layer plane of the liquid crystal layer, and b-axis is inclined with respect to a layer normal of the liquid crystal layer.

13. The liquid crystal display device of claim 11, wherein the internal scattering layer includes a polymer matrix and particles dispersed in the polymer matrix, the particles have a scattering center, and a refractive index of the particles and a refractive index of the polymer matrix are different from each other.

14. The liquid crystal display device of claim 11, wherein a haze value of the antiglare layer is equal to or greater than 15.

15. The liquid crystal display device of claim 11, wherein a haze value of the antiglare layer is equal to or greater than 40.

16. The liquid crystal display device of claim 11, wherein the antiglare layer is such that a value of transmitted image clarity is equal to or greater than 10 as measured with an image clarity meter in which a width of an optical comb is 0.5 mm.

17. The liquid crystal display device of claim 11, wherein a refractive index anisotropy $\Delta n(550)$ of a liquid crystal material of the liquid crystal layer for light having a wavelength of 550 nm is in a range of $0.060 < \Delta n(550) < 0.120$.

18. The liquid crystal display device of claim 11, wherein the phase compensation element is arranged so that b-axis forms an angle in a range of 15° to 75° with respect to a layer normal of the liquid crystal layer.

- 5 19. The liquid crystal display device of claim 11, wherein $(n_a - n_b) \times d$ is in a range of 80 nm to 250 nm, where d denotes a thickness of the phase compensation element in a layer normal direction of the liquid crystal layer.